



13 July 2012

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Dear Mr Pierce

John

Review of Distribution Reliability Outcomes and Standards – NSW Workstream Draft Report

Ausgrid welcomes the opportunity to provide a submission on the draft report on the review of NSW distribution reliability outcomes and standards.

The NSW review is operating under a constrained timeframe that utilises the current expression and structure of NSW reliability outcomes. Accordingly, our submission details some of our concerns relating to the methodology utilised to determine a NSW Value of Customer Reliability and highlights some implementation considerations should any changes be made to the NSW licence conditions for the 2014-19 regulatory period.

Ausgrid notes that the AEMC has commenced a broader national review that will assess the merits of establishing a national framework for distribution reliability outcomes. It is also noted that it will include consideration of reliability frameworks more broadly, eg “input-based” versus “output-based” approaches to reliability outcomes. Ausgrid considers that a future move to an “output-based” approach to setting reliability standards has some attraction as it has potential to lead to improved customer outcomes.

There appears little benefit in substantially amending aspects of the NSW licence conditions before the outcomes of the national review are determined (particularly if a fundamental new approach to achieving NSW reliability outcomes is recommended).

Notwithstanding the above, the NSW review provides an opportunity to make some minor but useful interpretive improvements to the licence conditions in the current regulatory period. Some of these have already been identified by the NSW Government’s Design Reliability Performance Licence Conditions (DRPLC) working group in 2010.

If you have any queries or wish to discuss this matter in further detail please contact Mr Keith Yates, A/Executive Manager Regulation & Pricing on 9269 4171.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Trevor Armstrong", written over a blue horizontal line.

TREVOR ARMSTRONG
Interim Chief Operating Officer

Submission on the Distribution Reliability Outcomes and Standards Draft Report – NSW Workstream

13 July 2012



1 Ausgrid's key messages on the outcomes of the AEMC Review

The proposed scenarios developed for the review are sufficient.

As the timeframe and the scope for the NSW work stream is constrained, the review is sensibly limited to four scenarios that utilise the current expression and structure of NSW reliability outcomes.

The impact analysis of changes in the level of reliability on customers is, by nature, averaged.

The methodology utilised to determine a NSW Value of Customer Reliability (VCR) in the review employed a customer survey to assess the desired level of reliability outcomes against existing customer experiences. The survey results have been averaged into various segments (residential and business across various feeder types). As a result, the report does not examine the actual distribution of the sample responses from customers other than average levels of desired reliability. Ausgrid has previously raised concerns with the methodology used to determine a NSW VCR and remains concerned about the future broad use of these figures to statistically (and adequately) represent NSW customers' value of reliability.

Average reliability impacts may not adequately reflect the experience of customers with the worst performance.

Reliability impacts in the report relate to average impacts of interruptions to supply. They do not consider high consequence, low risk events (such as a Sydney CBD outage or outages affecting a wide geographic area) or the possibility of a substantial worsening of reliability for those customers connected to the worst performing parts of the network.

Cost benefits are likely to be less than identified in the review

Updated demand forecasts predict that demand driven investment for the next regulatory period (2014–19) is lower compared to the expenditure contained in the review so overall capital expenditure savings are likely to be overstated. Moreover, benefits predicted towards the end of the review timeframe i.e. 2028-9 are inherently less reliable.

Interaction with the National Reliability Review

Ausgrid notes that the AEMC has commenced a national review that will assess the merits of establishing a national framework for distribution reliability outcomes and include consideration of reliability frameworks more broadly (e.g. "input-based" versus "output-based" approaches to reliability outcomes). Whilst there may be merit in changing the existing NSW approach, it would be a very significant change to move away from the existing design criteria approach. In this context, there appears to be little benefit in amending aspects of the NSW licence conditions before the outcomes of the national review are determined.

The review identified several useful modifications to the drafting of the current licence conditions.

Ausgrid considers that the review process undertaken by the AEMC provides an opportunity to make some minor but useful interpretive improvements to the licence conditions in the current regulatory period. Some of these have already been identified by the NSW Government's Design Reliability Performance Licence Conditions (DRPLC) working group in 2010.

Implementation considerations

Implementation of any of the scenarios considered by the AEMC will represent challenges to NSW DNSPs due to timing constraints posed by the regulatory determination process.

2 Response to Draft Report

Question 1 Approach to cost-benefit assessment

a) What discount rate should be used in converting capital expenditure and the value of expected energy not served to net present values?

Given the accuracy of the underlying numbers, any adjustment to discount rates is probably immaterial.

b) Should any other sensitivities be undertaken to test the bounds of our cost-benefit assessment?

Ausgrid submits that the sensitivity analysis applied was appropriate for the constrained review timeframe. We are of the view that there is little to be gained from undertaking further sensitivity analysis on these results.

Question 2 Customer survey results

Are there any implications from the NSW VCR survey methodology we have used that we should take into account in considering the survey results?

The AEMC report suggests that it may be appropriate for the AER to apply the NSW VCR developed for this review for setting incentive rates for NSW DNSPs under the STPIS¹. Ausgrid cautions against applying this suggestion particularly as the estimation of the value of customer reliability is a complex and difficult area and there are some concerns about the reliability of values that were produced from this process.

We note that the NSW VCR survey methodology utilises averages as a means of characterising the needs of various segments (residential and business across various feeder types). However, the Oakley Greenwood report's own data shows a diversity of community need that is not well characterised by average figures (for example, willingness to pay, willingness to accept, perceptions of reliability). There appears to be a diverse range of needs/expectations in relation to reliability and cost-effectiveness. Despite this, the Oakley Greenwood report proceeds to assume that the population has a normal distribution of economic damage rather than examining the actual distribution of the sample responses². More concerning is the omission of impact analysis on people with other than average levels of desired reliability. We question whether it is appropriate to target an average level of desired reliability, when there are disparate needs; this risks providing a level of reliability that actually suits very few customers.

In contrast to the approach utilised in the Oakley Greenwood report, the Victorian Department of Sustainability and the Environment, and the Victorian Essential Services Commission have successfully utilised a richer 'agent' based simulation methodology that supports a wide variety of community needs in their work on water demand forecasting, water trading and water pricing³. An 'agent' based simulation method reflects the true diversity of customer needs, and permits evaluation of the impact of specific strategies to any desired level of demographic breakdown.

In addition to the above, the Oakley Greenwood report has not considered the temporal nature of its survey results, which is unfortunate given the significance of changing reliability standards, and the longevity of their execution and effects. In other words, to what extent is the sampled appetite for cost savings a function of current economic conditions rather than longer term economic conditions.

We would submit that as the NSW economy (and Ausgrid's distribution area in particular) continues to move towards a global 24/7 knowledge based economy (i.e. Information Technology/Communication intensive); to what extent are future reliability needs greater than present. Anecdotal feedback on the impact of power disruptions on home-based businesses serving the global information economy in Ausgrid's distribution area suggest that a more strategic insight into VCR is warranted, with a richer depth of temporal considerations.

¹ AEMC Draft Report NSW Workstream, p 103.

² Oakley Greenwood. NSW Value of Customer Reliability, p 45.

³ Water Journal May 2011

Question 3 Options for changes to the proposed scenarios

a) Should any further changes to the AEMC's proposed scenarios be considered? If so, what changes should be considered?

Ausgrid disagrees with Nuttall Consulting comments in the draft report that further changes to the proposed scenarios could be considered and modelled before the release of the final report in August 2012⁴. As the timeframe for the NSW workstream is constrained, the review is sensibly limited to four scenarios and the current expression and structure of NSW reliability outcomes. The national review is an opportunity to review reliability frameworks more broadly.

b) Are there any additional impacts associated with the AEMC's proposed scenarios which should be taken into account? For example, this could include impacts which may have been difficult to model by the DNSPs?

Reliability impacts in the report relate to average impacts. They do not consider high consequence, low risk events (such as a Sydney CBD outage or outages affecting a wide geographic area) or the possibility of a substantial worsening of reliability for those customers connected to the worst performing parts of the network.

Any proposed change would need to be reviewed in detail to ensure the expected benefits were reasonable and that any unintended consequences were identified. For example, relaxing design criteria will lead to greater operational difficulty. One of the reasons for having redundancy in system design is to allow for planned outages for maintenance and construction activities without the necessity for widespread customer interruptions. Planned outages are already limited to narrow time windows between peak seasons and times. These windows would become narrower the further design requirements were relaxed and might result in the system becoming effectively unmaintainable

c) Should the definition of a "major event day" in the NSW licence conditions be aligned to the definition used in the AER's reporting framework?

Yes. Ausgrid supports that the definition of a "major event day" in the NSW licence conditions be aligned to the definition used in the AER's reporting framework. This has the effect of excluding planned outages in the calculation of the major event day threshold value. Ausgrid is currently using the AER's definition for "major event day" for regulatory reporting purposes.

Question 4 Implementation considerations

Are there any other implementation considerations that should be taken into account in relation to the AEMC's scenarios for distribution reliability in NSW?

Inclusion of changes in 2014-19 regulatory submissions

The AEMC suggested that it would be possible for NSW DNSPs to include changes to expenditure in regulatory submissions for 2014-19 (due to be submitted in May 2013) if the NSW Government's policy intent has been communicated to them⁵. Ausgrid submits that the implementation of any of the scenarios considered by the AEMC will represent challenges to NSW DNSPs due to timing constraints posed by the regulatory determination process.

The regulatory submission for NSW DNSPs is required to be submitted to the AER in May 2013. Due to the network planning component being a critical input requirement in the development of the regulatory proposal to the AER, as well as the large resource and time requirements needed to undertake the planning for the investment programs, this process is already substantially complete using the current NSW reliability and planning licence conditions. It will become increasingly more difficult to reliably change basic planning inputs as the regulatory submission date approaches.

In terms of the forecasting process, it will introduce risk for DNSPs, both in terms of whether a number of forecasts could be produced to the necessary standard and the implications of this proposed approach for the propose/respond model and the AER's assessment of that proposal.

⁴ AEMC Draft Report NSW Workstream, p 86

⁵ AEMC Draft Report NSW Workstream, p 94

Networks NSW also considers there appears to be little value in substantially amending aspects of the NSW licence conditions before the outcomes of the AEMC’s national review are determined (particularly if a fundamental approach to achieving NSW reliability outcomes is recommended).

Interaction with National Review

Ausgrid notes that the National Review that has been recently commenced by the AEMC will assess the merits of establishing a national framework for distribution reliability outcomes and include consideration of reliability frameworks more broadly (for example, “input-based” versus “output-based” approaches to reliability outcomes). Ausgrid considers that a future move to an “output-based” approach to setting reliability standards has some attraction as it has potential to lead to improved customer outcomes. However, we agree with the AEMC that:

“it would be a very significant change for the NSW licence conditions to move away from an approach that incorporates design planning criteria. Further analysis would be required before determining whether such a change was appropriate. Such a change would also require the NSW DNSPs to make significant changes to how they plan and operate their networks and it is unlikely that it could be implemented before the start of the next regulatory control period.”⁶

As part of the National Review process, Networks NSW will submit that given the significant analysis that would be required to appropriately define an “output-based” reliability regime, it is appropriate to maintain the existing expression and structure of distribution reliability obligations in the NSW licence conditions for the preparation of the regulatory submissions for the 2014-19 regulatory period.

Updated demand forecasts

Ausgrid has recently completed updated forecasts for future electricity demand. As a result, demand driven investment for the next regulatory period (2014–19) is likely to be impacted. For example, in the case of Ausgrid, demand driven investment is now forecast to be notably lower compared to the expenditure contained in the review so overall capital expenditure savings are likely to be overstated. Also, as noted by the AEMC, it would take several years to obtain the full benefit of the identified expenditure reductions.

Differences in network operation and reliability performance between the NSW DNSPs

The draft report noted differences between the planning and operational processes used by the three DNSPs and their reliability performance and compliance. It also noted that the AER considered that the NSW DNSPs had targeted appropriate levels of compliance, given the costs and benefits of the alternatives.⁷ However, the report also states that recent performance against the reliability standards indicates that the NSW DNSPs have been out-performing against the standards, which may suggest that compliance with the standards could have been achieved with a lower amount of capital expenditure⁸.

Ausgrid agrees with the AEMC that the differences in the approaches used by the NSW DNSPs to meet the existing licence conditions may be due to a range of historical and external factors and are outside the scope of the review⁹. However, Ausgrid would offer the following observations:

1. Prior to the introduction of the licence conditions in 2005, the NSW DNSPs were responsible for determining the appropriate level of reliability for their customers. A review of the historical performance of all three DNSPs would demonstrate that for most categories of feeders, performance was already improving.
2. Reliability standards in the licence conditions were established in 2005 based on historical performance reported in legacy reporting systems. All three NSW DNSPs have since introduced more accurate reporting systems which corrected some of the over-reporting (i.e. Short Rural SAIDI performance) and under-reporting (Urban SAIDI performance) from legacy period reporting.

⁶ AEMC Draft Report NSW Work stream, p 18

⁷ AEMC Draft Report NSW Workstream, p 105

⁸ AEMC Draft Report NSW Workstream, p 7

⁹ AEMC Draft Report NSW Workstream, p 106

Opportunity to correct some interpretive issues with the current licence conditions

In framing the scenarios, the review identified several useful modifications to the drafting of the current licence conditions. This represents an opportunity to make some minor but useful interpretive improvements in the current regulatory period. Some of these have already been identified by the NSW Government's Design Reliability Performance Licence Conditions (DRPLC) working group in 2010.

The inclusion of a confidence level in Clauses 15.1 & 15.2

In principle, Ausgrid supports the approach in Scenarios 1-3 to amend clauses 15.1 & 15.2 to include a confidence level rather than to prescribe an absolute (i.e. 100% compliance) SAIDI and SAIFI target each year (Schedule 2). Ausgrid would submit that the licence conditions should be amended to reflect an arrangement where the percentage confidence level can be agreed between the DNSP and the NSW Minister. This arrangement allows each DNSP to comply with the schedule 2 reliability standards but accommodates the natural variation exhibited by reliability performance outcomes from year-to-year.

Urban distribution feeders

Ausgrid would recommend the removal of Note 4 of Schedule 1 – Design Planning Criteria (and associated reference in Note 5). The current note can lead to over investment in urban feeder networks and can be interpreted in different ways.

With this note removed, the DNSPs will still ensure that all customers can have supply restored within 4 hours for a contingent outage but will not be compelled into investment when feeders are loaded to 80%.

Major event day threshold

As outlined in our response to question 3(c).